

# Water Forward Implementation Progress Update: Supply Update and Water Forward FY20 Annual Report

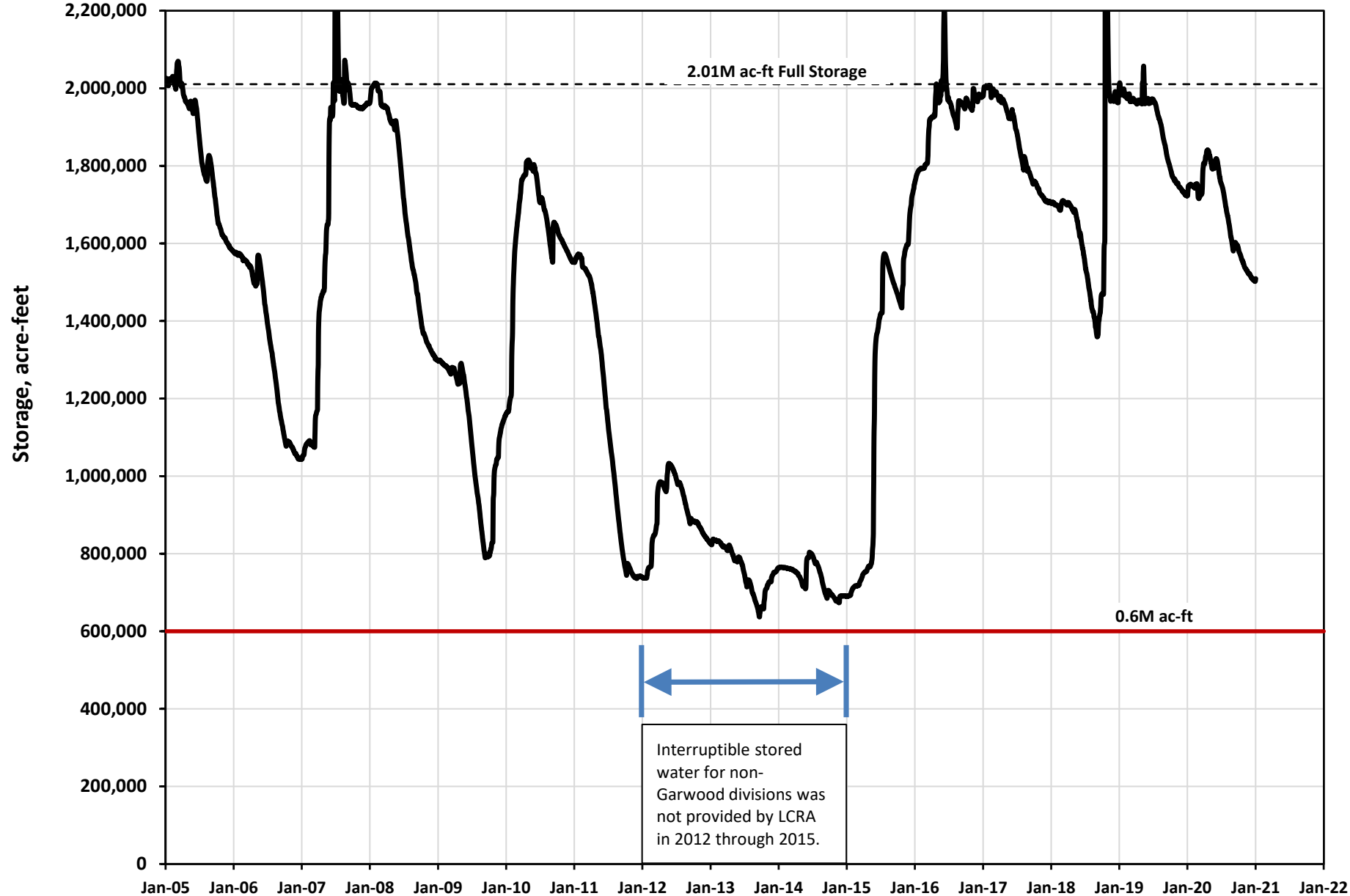
1/12/2021





# Combined Storage of Lakes Buchanan and Travis

January 1, 2005 through January 1, 2021

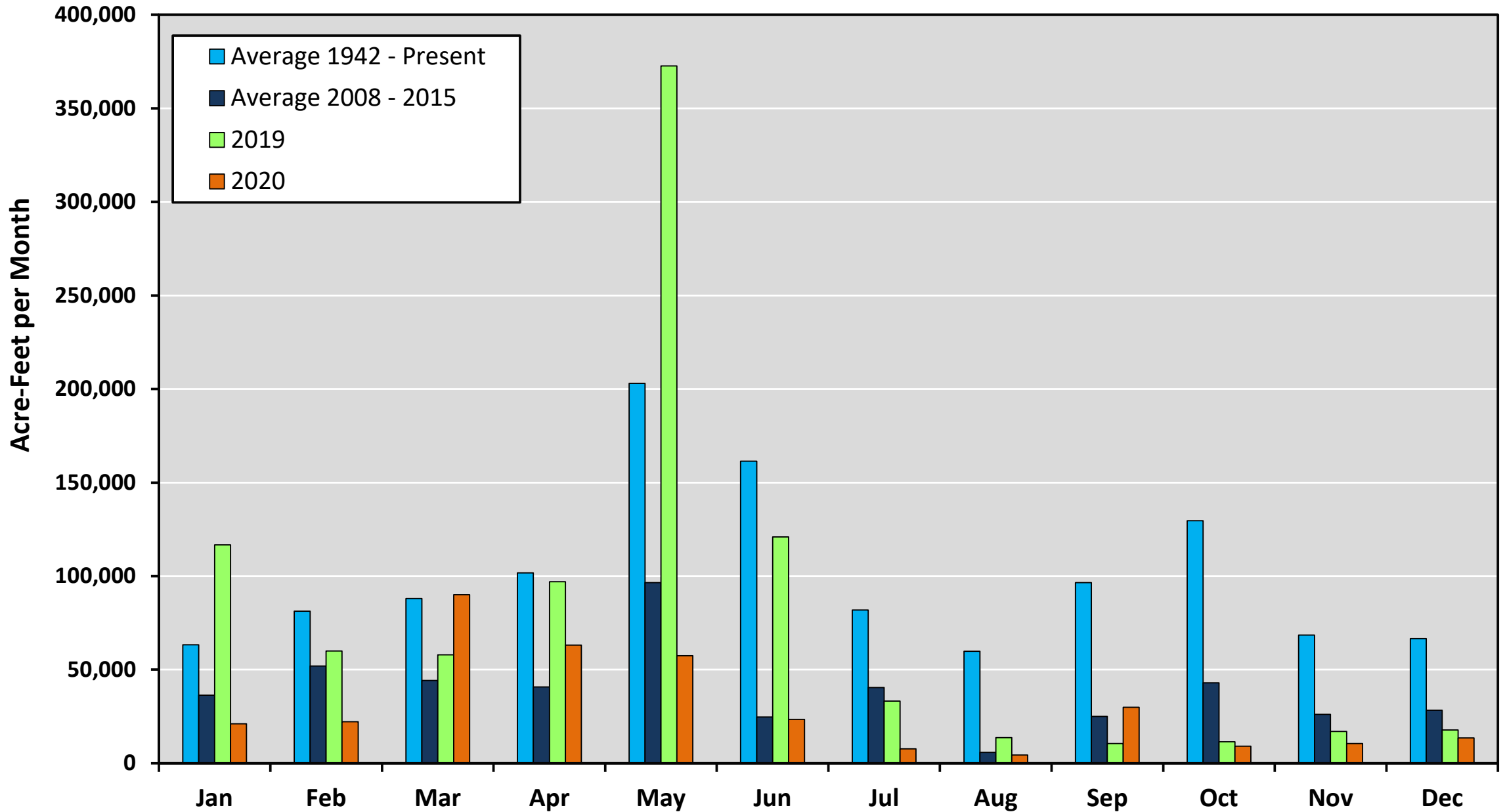


## Current Water Supplies



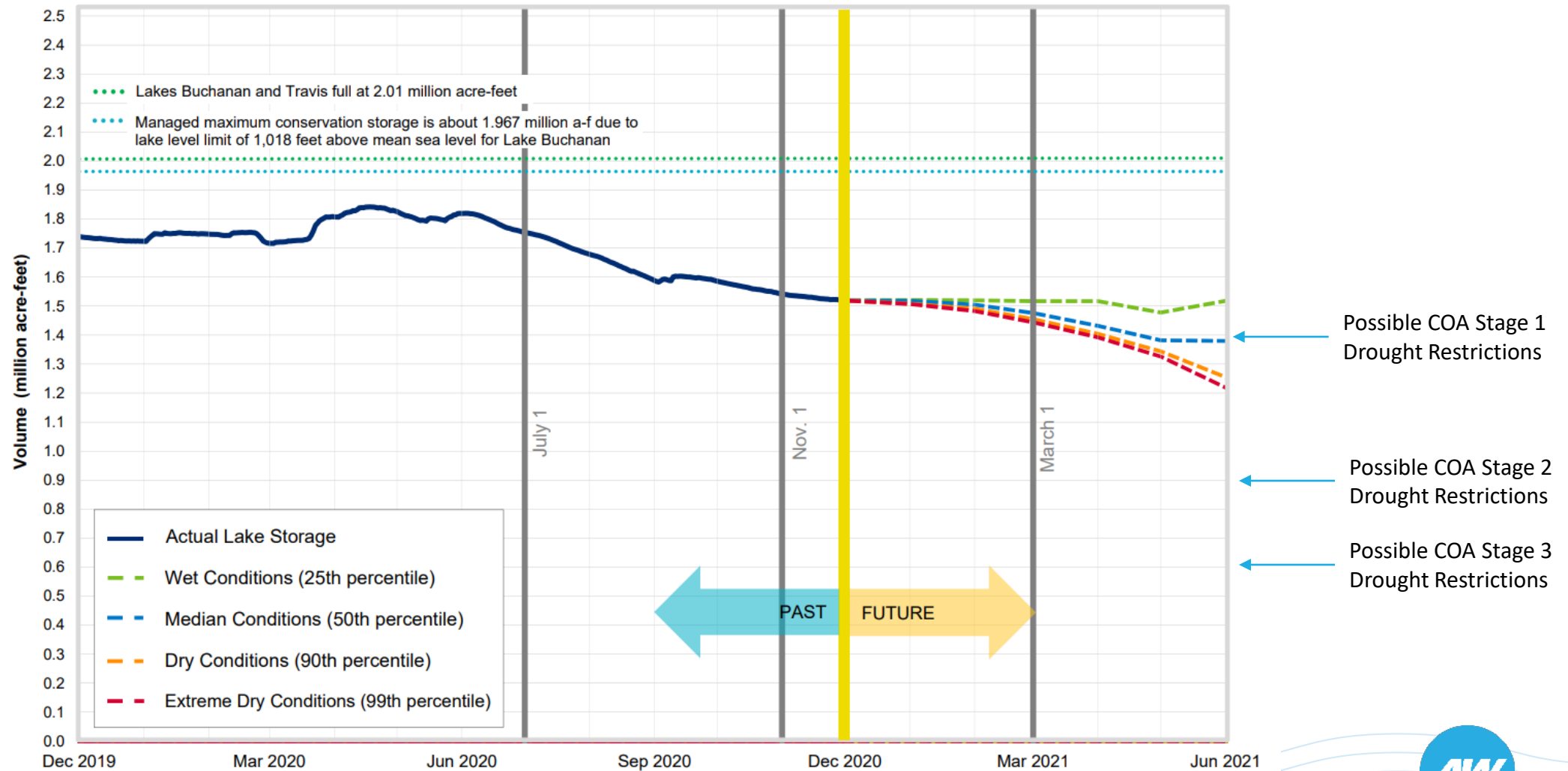
# Monthly Inflows to Lakes Buchanan and Travis

Data through December 31, 2020



# LCRA Lake Levels Forecast

Lakes Buchanan and Travis Total Combined Storage Projections



Date: Dec. 1, 2020

Note: One acre-foot equals 325,851 gallons



# Water Forward FY20 Annual Report

- ◆ This report documents Austin Water's progress made during Fiscal Year 2019-2020 (FY20) to implement the Water Forward plan. Despite challenges posed by the COVID-19 pandemic, staff made considerable progress on near term Water Forward strategies
- ◆ Most of the data in this document was able to be reported on a fiscal year basis. In some instances only calendar year data was available and that has been noted where necessary.



# Awards & Recognition

## Austin Water, TX



**2020 Partnering & Engagement**



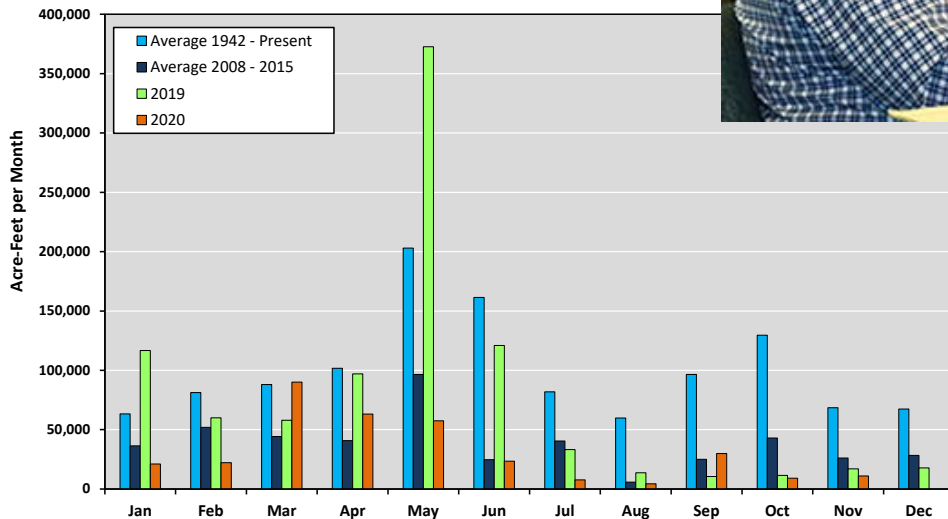
“The innovations coming to the water sector present an opportunity for a paradigm shift in the way utilities think about and solve long-standing challenges to clean and reliable water,” said Jackie Jarrell, WEF President. “WEF is excited to recognize Austin Water for embracing innovative ways to better serve their communities.”



# Protecting Our Core Colorado River Supplies



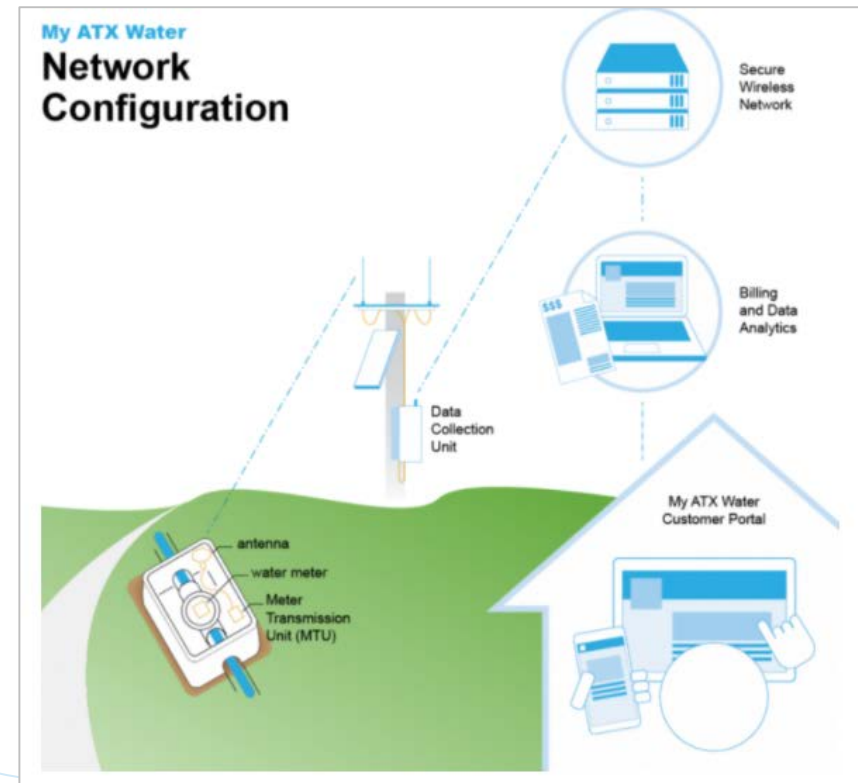
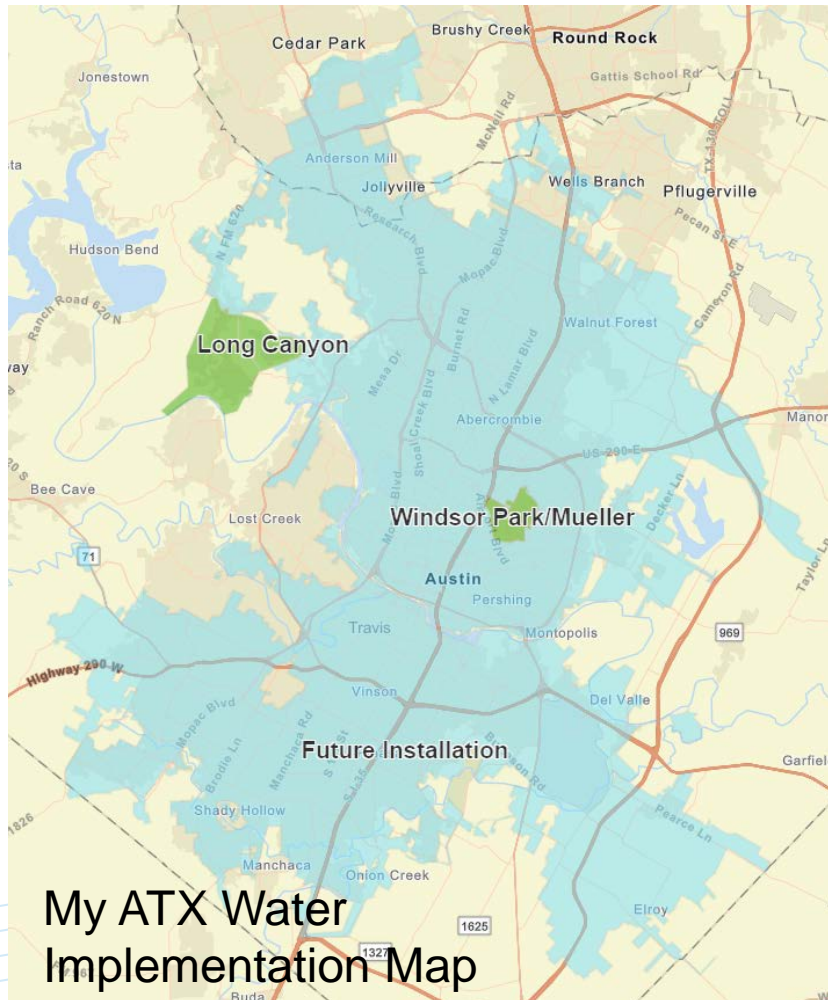
Monthly Inflows to Lakes Buchanan and Travis  
Data through November 30, 2020





# My ATX Water

## Austin's Smart Water Meter System





# Existing and Updated Conservation Programs

## ♦ **New Commercial, Industrial and Institutional Water Conservation Ordinances**

- Added water efficiency standards for drift eliminators in cooling towers and the requirement that biocide be used in the cooling tower recirculating water to increase water efficiency and reduce the potential for airborne bacteria such as Legionella;
- Imposed administrative penalties for failure to submit required cooling tower registration and annual inspection reports to ensure towers are meeting all water efficiency standards and equipment requirements; and
- Made ineligible for evaporative loss credit on the wastewater bill, facilities with cooling towers for which required registration and inspection reports are not submitted.

## ♦ **New and Revised Water Conservation Incentive Programs**

- Added new measures and equipment for residential and commercial irrigation system efficiency upgrades and landscape transformation rebates
- Added new rebate programs for residential “Laundry to Landscape” graywater reuse and efficient pool backwash cartridge filters
- Doubled rebate amounts based on new cost/benefit benchmarking information contained in the 2018 Water Forward Plan
- Streamlined the rebate application review and approval process



# Alternative Water and Conservation Ordinances

**Phase I to take effect late 2020/early 2021**

## **Voluntary OWRS Program**

- New OWRS regulations in Title 15 (Utility Regulations) for the design, permitting and operation and maintenance of multi-family & commercial systems

**Phase 2 targeted to take effect 2023/2024**

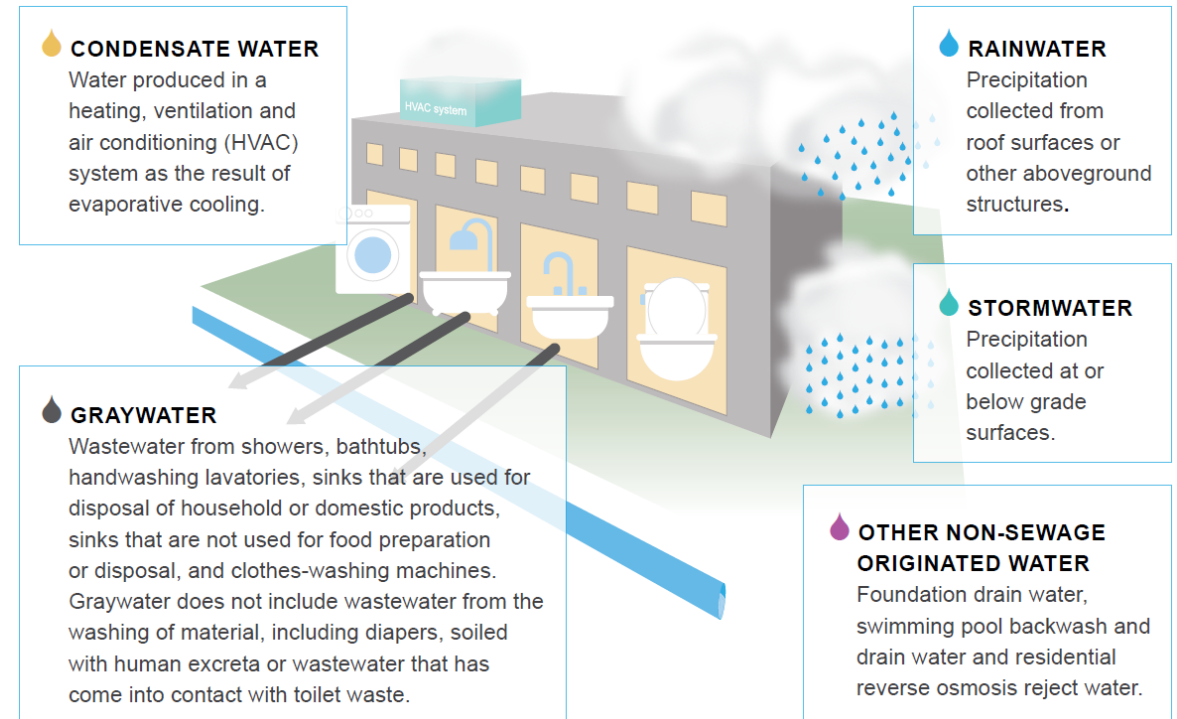
## **Mandatory OWRS Program**

- Mandatory installation of OWRS for commercial and multi-family developments >250,000 sq. ft. in Title 25 (Land Development Code)
- Rules will be posted on the applicability for the mandate along with provisions for enforcing the mandate



# Alternative Water Incentives

- 💧 Pilot grant program developed
- 💧 Projects reusing >1,000,000 gallons per year of water are eligible for \$250,000
- 💧 Projects reusing >3,000,000 gallons per year of water are eligible for \$500,000



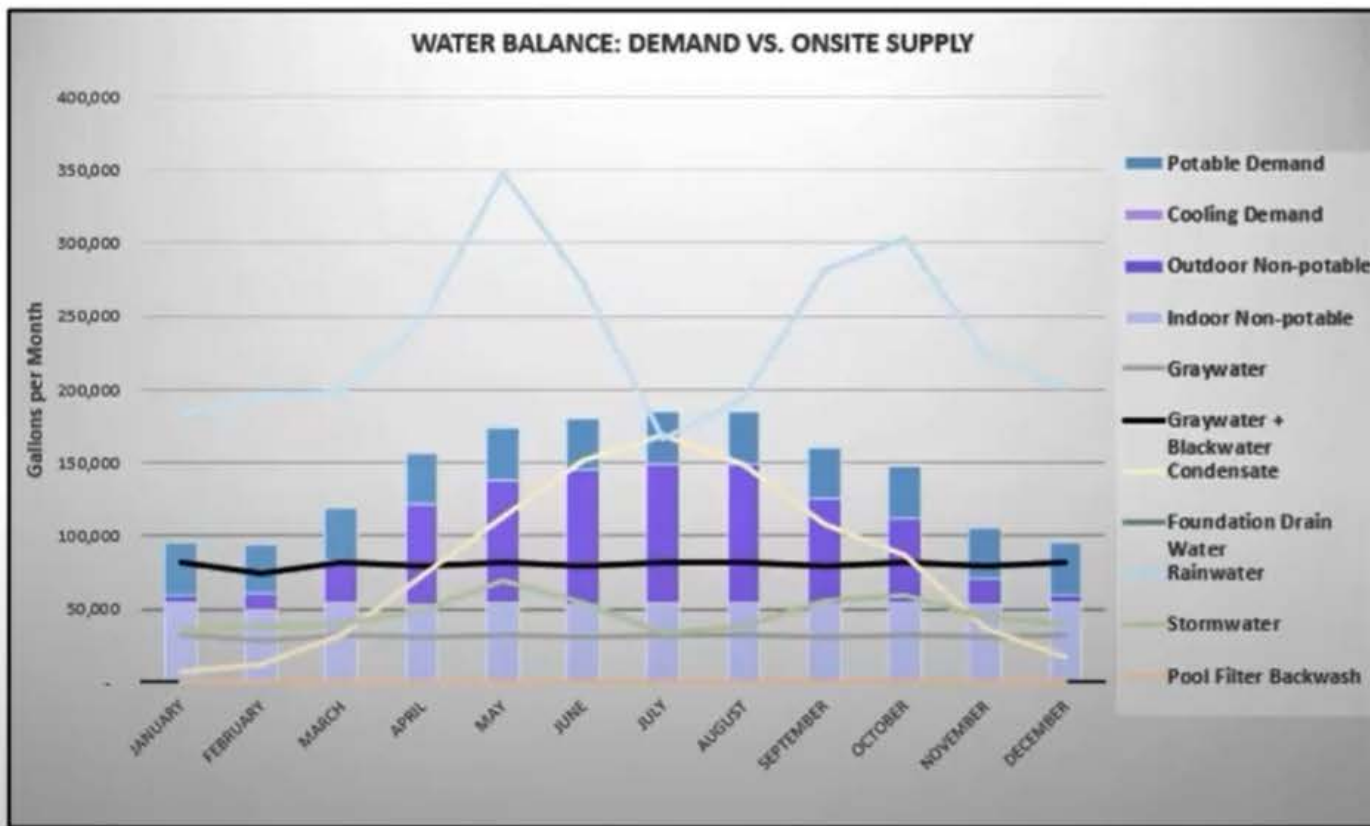


# Onsite Water Blackwater Reuse Pilot

OSCAR (On-Site Collection and Reuse) and  
CLARA (Closed-Loop Advanced Reclaimed Assembly)



# Water Use Benchmarking



DEMANDS	PROJECT SUMMARY	SUPPLIES
<p>GPD = gallons per day GPY = gallons per year</p> <p><b>POTABLE DEMANDS:</b></p> <p>POTABLE FIXTURES/FEATURES</p> <p>1,200 GPD</p> <p>426,100 GPY</p> <p><b>NON-POTABLE DEMANDS:</b></p> <p>INDOOR FIXTURES/FEATURES</p> <p>1,800 GPD</p> <p>645,100 GPY</p> <p>COOLING</p> <p>- GPD</p> <p>- GPY</p> <p>OUTDOOR IRRIGATION/FEATURES</p> <p>1,700 GPD</p> <p>627,200 GPY</p> <p><b>TOTAL NON-POTABLE DEMAND</b></p> <p>5,000 GPD</p> <p>1,917,400 GPY</p>		<p><b>GRAYWATER</b></p> <p>1,000 GPD</p> <p>373,300 GPY</p> <p><b>GRAYWATER + BLACKWATER</b></p> <p>2,600 GPD</p> <p>964,100 GPY</p> <p><b>CONDENSATE WATER</b></p> <p>2,600 GPD</p> <p>955,200 GPY</p> <p><b>FOUNDATION DRAIN WATER</b></p> <p>- GPD</p> <p>- GPY</p> <p><b>RAINWATER</b></p> <p>7,700 GPD</p> <p>2,815,700 GPY</p> <p><b>STORMWATER</b></p> <p>1,500 GPD</p> <p>559,100 GPY</p> <p><b>POOL FILTER BACKWASH WATER</b></p> <p>- GPD</p> <p>- GPY</p> <p><b>TOTAL ONSITE SUPPLIES</b></p> <p>15,000 GPD</p> <p>5,294,000 GPY</p>

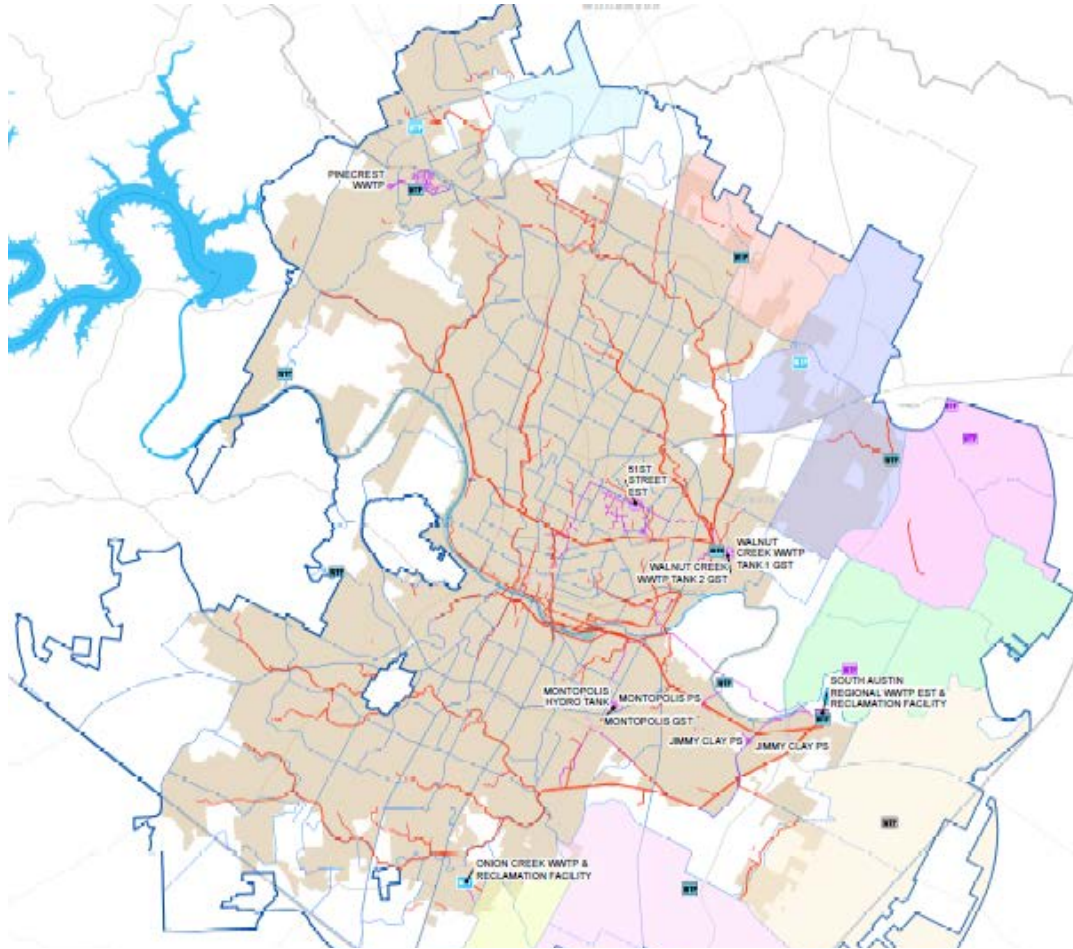


# Centralized Reclaimed





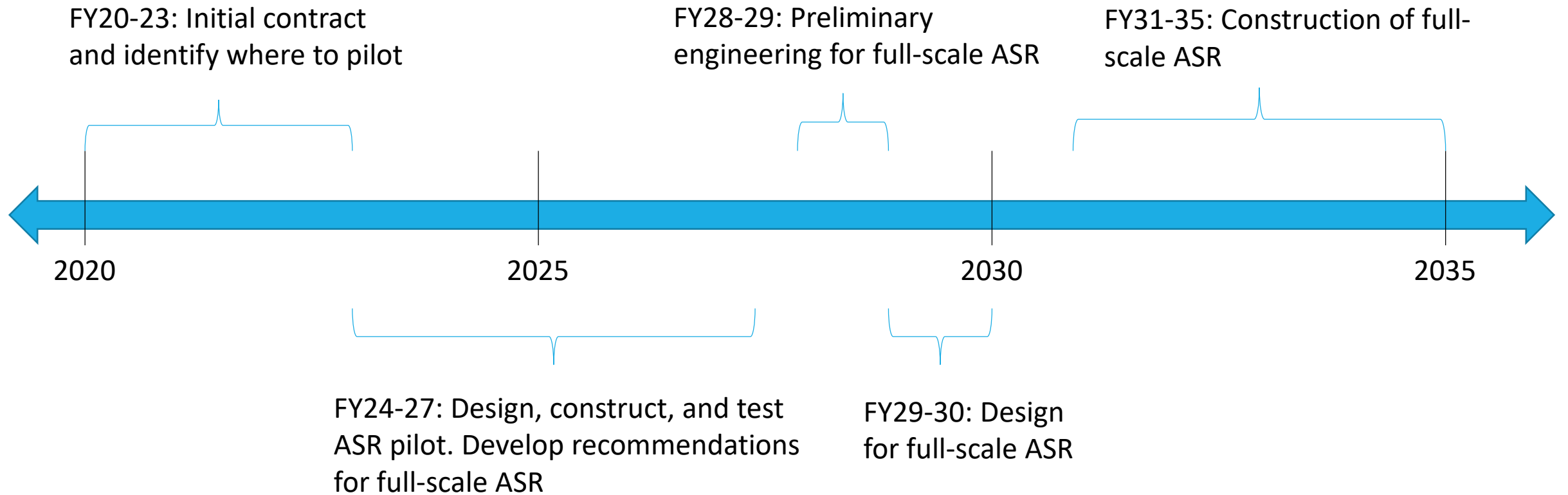
# Decentralized Reclaimed



Preliminary Draft Conceptual Areas for Further Study

- Staff re-evaluating long-range infrastructure planning processes to better identify and integrate opportunities for decentralized reclaimed

# Aquifer Storage and Recovery



# Metrics

- Future projections and targets are as reported in the adopted 2018 Water Forward plan.
- Savings and yield targets will be updated starting with the 2023 Water Forward plan update to reflect strategy implementation progress and improvements to strategy savings and yield estimates.

## Population, Pumpage and Gallons Per Capita Per Day (GPCD)

	FY19 Actual	FY20 Actual	2020 Projection Water Forward 2018 Plan	2040 Projection Water Forward 2018 Plan
Served Population (Retail and Wholesale)	1,078,171	1,099,990	1,101,600	1,577,800
Potable Pumpage <sup>2</sup> (Acre Feet per Year)	145,000	157,000	144,000	160,000
Potable GPCD <sup>3</sup>	120	127	117	91
Potable and Non-Potable Water Provided <sup>4</sup> (Acre Feet per Year)	149,700	161,800	145,000	182,000
Potable and Non-Potable GPCD <sup>5</sup>	124	131	117	103

## Water Forward Strategy Savings and Yield

Strategy	FY19 Actual Savings or Yield (acre-feet)	FY20 Actual Savings or Yield (acre-feet)	2020 Target (acre- feet/year)	2025 Target (acre- feet/year)	2040 Target (acre- feet/year)
Advanced Metering Infrastructure (AMI)	-	-	600	600	3,880
Utility-Side Water Loss Control (savings) <sup>6</sup>	-	-	3,110	4,090	9,330
Commercial, Industrial, and Institutional (CII) Ordinances	-	-	1,060	1,060	1,060
Water Use Benchmarking and Budgeting	-	-	-	-	5,950
Landscape Transformation Ordinance	-	-	-	-	3,040
Landscape Transformation Incentive	-	TBD	-	80	320
Irrigation Efficiency Incentive	-	TBD	40	80	210
Alternative Water Ordinance	-	-	-	210	1,620
Alternative Water Incentive	-	TBD	-	500	3,860
Sewer Mining	-	-	-	10	1,000
Distributed Wastewater Reuse <sup>7</sup>	443	448	410	420	3,560
Centralized Reclaimed Water System <sup>8</sup>	4,140	4,368	3,980	4,590	15,480
Aquifer Storage and Recovery	-	-	-	-	60,000
Brackish Groundwater Desalination	-	-	-	-	-
Indirect Potable Reuse (IPR) through Lady Bird Lake	-	-	-	-	11,000
Capture Local Inflows to Lady Bird Lake	-	-	-	-	3,000
Off Channel Reservoir	-	-	-	-	-



# Looking Forward

- Continued community and stakeholder engagement
- Further study to inform the implementation of a future Indirect Potable Reuse project
- Anticipated completion of the Centralized Reclaimed Water Master Plan
- Preliminary analyses to support updates to the Water Forward Plan, to be completed in 2023







# QUESTIONS

